Arkansas PRAMS Pregnancy Risk Assessment Monitoring System Report

Gestational Diabetes Mellitus in Arkansas Women Who Had Live Births: PRAMS, 2006 - 2010

What is Gestational Diabetes Mellitus?

Gestational Diabetes Mellitus (GDM) is a type of diabetes that begins and ends during pregnancy. GDM is similar to Type 1 or Type 2 diabetes; it is a condition where your body has a hard time breaking down and processing high levels of blood sugar.

How common is GDM?

According to data from the Arkansas PRAMS survey for 2006 – 2010, about 10% of women who had a live birth in Arkansas had GDM. The CDC estimates that in 2010 GDM affected between 2-10% of all pregnancies in the United States.[1]

The American Diabetes Association has come up with new guidelines for determining if women have GDM. Because of these new guidelines, the percent of women who are diagnosed with GDM is likely to double. [2]

What are some risk factors for GDM?

- Being 30 years of age or older;
- Overweight **(BMI= 25-29.9)** or Obesity **(BMI 30 and over)** before pregnancy;
- Smoking;
- Excessive weight gain during pregnancy;
- Being Black or Hispanic;
- Family history of Type 2 diabetes or GDM;
- GDM during a previous pregnancy;
- Previous baby that weighed more than 9 lbs when born.

For the last five years, more than 10% of Arkansas mothers who had a live birth reported having Gestational Diabetes Mellitus (GDM). This is one of the highest rates in the nation.

Having GDM puts the woman and her baby at a lifelong risk for developing Type 2 diabetes. Almost 60% of mothers with GDM will later develop Type 2 diabetes.

A Diabetes Self-Management Education (DSME) course can help keep the mother and baby healthier and also save a great deal of money.

Arkansas mothers most likely to have GDM were:

- Hispanic.
- Thirty-five years of age and older,
- Obese (BMI 30 or greater),
- Less educated.

How do women find out they have GDM?

The oral glucose tolerance test is used to screen for GDM. The test is usually given when a woman is 24-28 weeks pregnant. It involves drinking a high sugar liquid and having the blood tested an hour later to determine how the body is processing the sugar. If there are still high levels of sugar in the blood, it is probable that the person has GDM. All pregnant women should be screened for GDM during their pregnancy.

Why is GDM important?

Having GDM increases a woman's risk of developing Type 2 diabetes. Her baby is at risk for becoming overweight or obese in childhood or adolescence, which increases their own risk for Type 2 diabetes. For most women, GDM will go away after they have their babies. However, 5 to 10 percent of the women that are diagnosed with GDM will develop Type 2 diabetes immediately after having a baby. It is suspected that these women actually had undiagnosed Type 2 diabetes prior to pregnancy. Additionally, about 6 out of every 10 women who have GDM will develop Type 2 diabetes within 10-20 years.

Other health problems or complications that can be caused by GDM include the following:

- Stillborn babies,
- Preterm or premature births,
- Caesarian sections,
- Pre-eclampsia (pregnancy-induced high blood pressure)
- Large baby-birth trauma because of higher chance of the baby being born too large (9 lbs or more),
- Infants born with low blood sugar,
- Delayed lung maturation.

Also, uncontrolled GDM is very expensive and can add thousands of dollars to pregnancy costs, plus hundreds of dollars more for the first year of the baby's life.

How can GDM be managed?

One of the most important things a pregnant woman with GDM can do is to discuss with her health care provider how she can manage her diabetes and where she can find the help she needs to do it. Her health care provider should refer her to a recognized Diabetes Self Management Education (DSME) program. A DSME program typically emphasizes healthier eating, exercise, and medical monitoring of blood sugar levels (see Recommendations on page 4 for more information).

DSME is an ongoing process of acquiring knowledge, skill, and the ability necessary for diabetes self-care. The overall objectives of DSME are to support informed decision making, self-care behaviors, problem-solving and an active relationship with the health care team and to improve clinical outcomes, health status, and quality of life.[3] To locate a DSME program go to: www.diabeteseducator.org or www.diabetes.org;

A DSME course can help keep the mother and baby healthier and also save a great deal of money. High risk pregnant women with GDM taking a DSME course can save an average of $13,000 on pregnancy-related health care costs.[4] Women (and their families) that use the DSME are less likely to develop Type 2 diabetes later in life.

GESTATIONAL DIABETES MELLITUS IN ARKANSAS, 2006-2010

The PRAMS survey has had two different questions about gestational diabetes. In the 2009 and 2010 surveys, mothers were asked the following question:

During your most recent pregnancy, were you told by a doctor, nurse, or other health care worker that you had gestational diabetes (diabetes that started during this pregnancy)?

In the surveys for 2006-2008, mothers were asked:

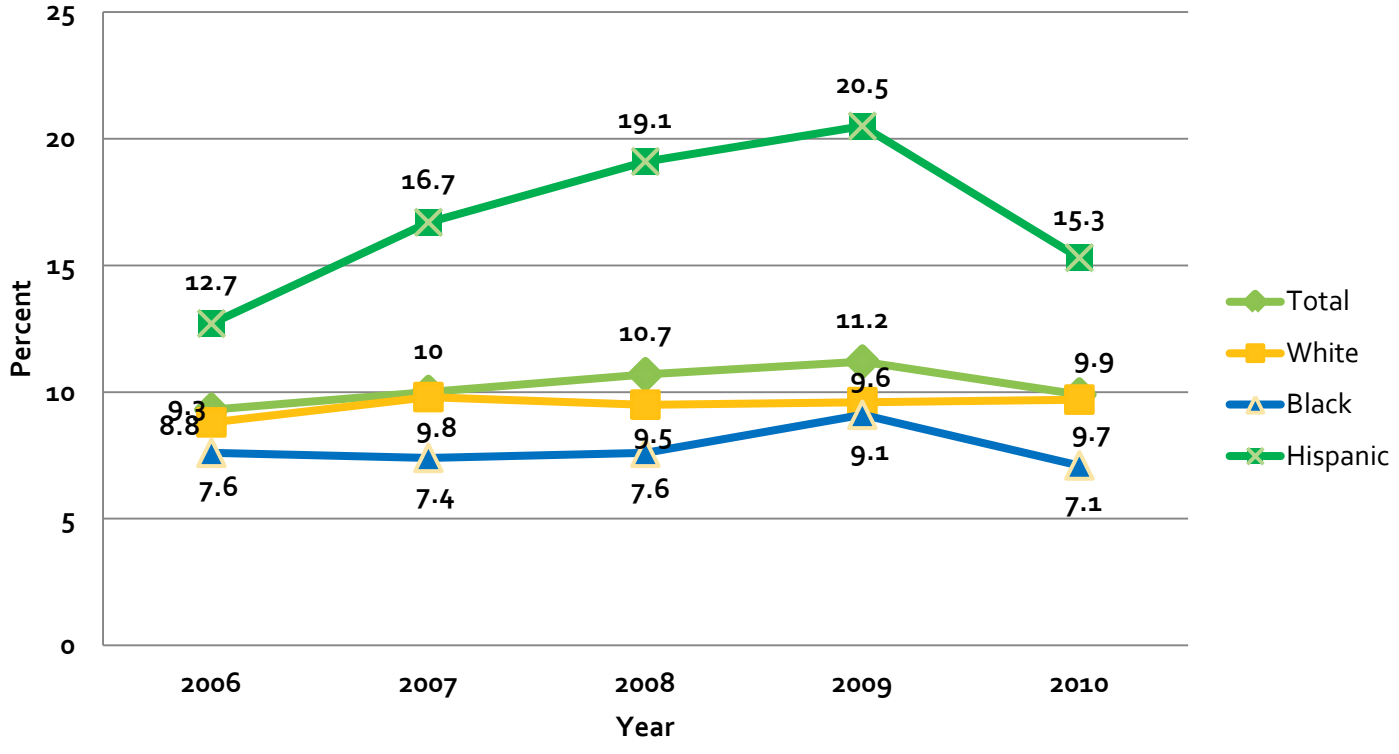
Did you have any of these problems during your most recent pregnancy? They marked either "Yes" or "No" to "High blood sugar (diabetes) that started during this pregnancy?"

In this report, the percent of women with GDM is shown in two formats. First, Figure 1 shows for each year from 2006-2010 the percent of women by race and ethnicity that had GDM. Then, in Figure 2, the data for the five years (2006-2010) was combined to show selected characteristics of women with GDM. Combining the data is necessary because of the small sample sizes for some of the characteristics.

What are the trends in GDM in Arkansas by race and ethnicity for 2006-2010 (Figure 1)?

Figure 1 shows the percent of Arkansas women who had a live birth and reported having GDM by year from 2006-2010.

Figure 1. Gestational Diabetes in Women Who had Live Births, by Race/Ethnicity and Year: Arkansas PRAMS, 2006-2010*

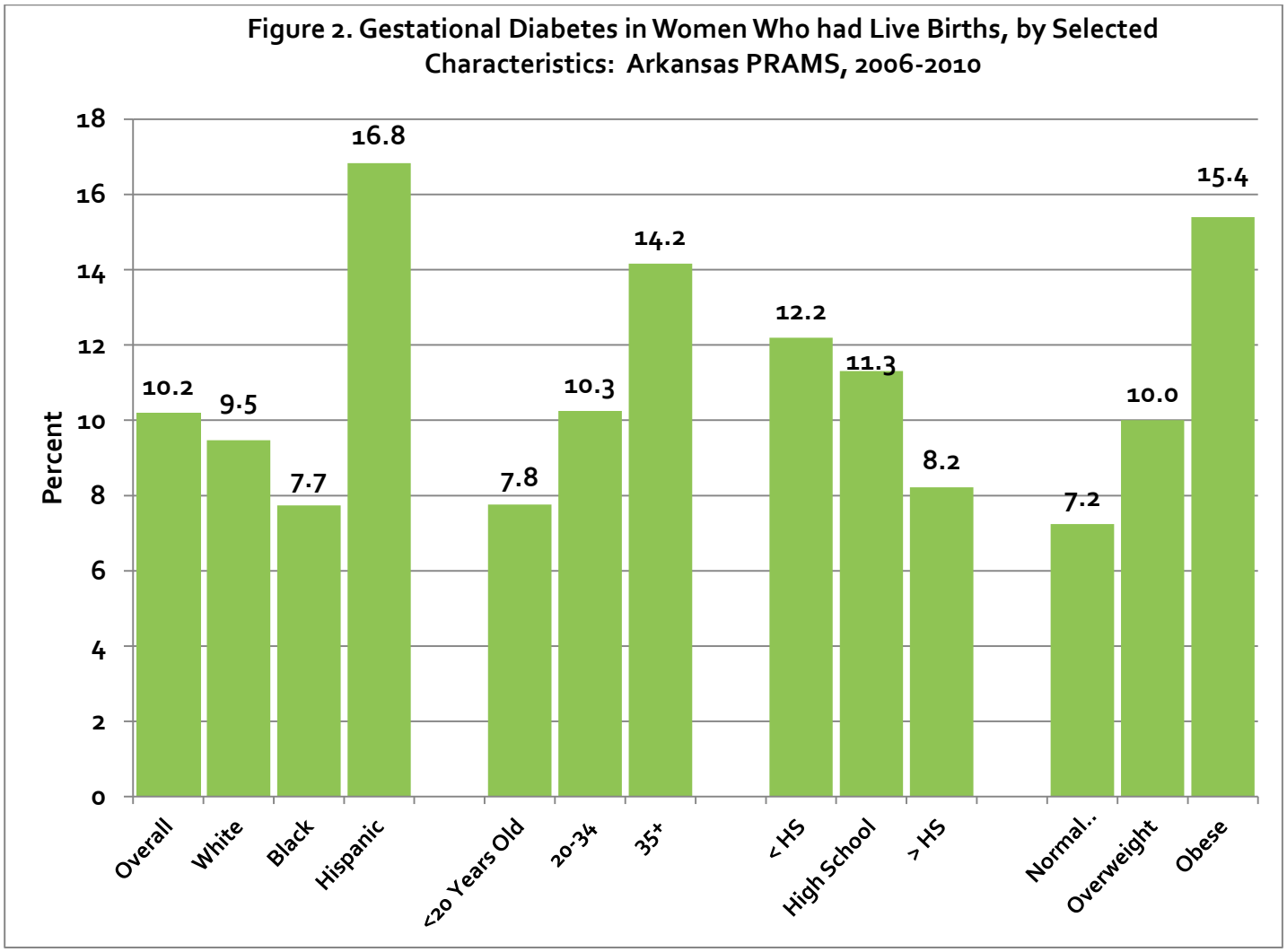


*Rates for Hispanics maybe unreliable because of limited sample size.

What are some of the characteristics of women in Arkansas who had GDM from 2006-2010 (Figure 2)?

- The overall average percent of Arkansas mothers who developed GDM between 2006-2010 is 10.2%.
- Mothers most likely to have GDM were:
  - Hispanic.
  - Thirty-five years of age and older,
  - Obese (BMI 30 and over),
  - Less educated.

Figure 2. Gestational Diabetes in Women Who had Live Births, by Selected Characteristics: Arkansas PRAMS, 2006-2010



Diabetes by Public Health Region

For the five public health regions in Arkansas the percentage of women with GDM were similar, ranging from 8.1 in the Southeast Region to slightly more than 10% in the Northwest, Southwest, Central, and Northeast Regions (not shown). There were no significant differences between the regions.

Recommendations

The National Diabetes Education Program www.YourDiabetesInfo.org recommends eight action steps for women with GDM.

1. Let all future health care providers know that you had GDM. Women with GDM have a lifetime risk for developing Type 2 diabetes.
2. Get tested for diabetes 6 to 12 weeks after your baby is born, then at least once every year after that.
3. Breastfeed your baby. It may lower your child's risk of being overweight or obese. These are risk factors for Type 2 diabetes.
4. Talk to your doctor if you plan on becoming pregnant again.
5. Try to reach your pre-pregnancy weight 6 to 12 months after your baby is born. Then, if you still weight too much, work to lose at least 5 to 7 percent of your body weight slowly, over time, and keep it off.
6. Make healthy food choices such as fruits and vegetables, fish, lean meats, dry beans and peas, whole grains, and low-fat or skim milk and cheese. Choose water to drink.
7. Eat smaller portions of healthy foods to help you reach and stay at a healthy weight.
8. Be active at least 30 minutes, 5 times per week to help burn calories and lose weight.

References:

1. 2011 National Diabetes Fact Sheet. Gestational diabetes in the United States. Available at: http://www.cdc.gov/diabetes/pubs/estimates11.htm#8. Accessed August 2, 2012.

2. Standards of medical care in diabetes - 2012. *Diabetes Care.* January 2012; 35 (suppl): 11S-63S.

3. Funnell M, Brown, TL, Childs, BP, et al. National standards for diabetes self-management education. *Diabetes Care.* January 2010; 33 (suppl): 89S-96S.

4. Fitzner K, Greenwood D, Payne H, et al. An assessment of patient education and self management in diabetes disease management – two case studies. *Population Health Management.* December 2008; 11: 329-340.

The Pregnancy Risk Assessment Monitoring System (PRAMS) is an on-going, population-based surveillance system sponsored by the Centers for Disease Control and Prevention (CDC). The PRAMS survey asks women who recently had a live birth about maternal behaviors and experiences that occur before, during and after pregnancy that might affect their health and the health of their babies. For more information about PRAMS, go to the Arkansas PRAMS webpage www.healthy.arkansas.gov/programsServices/healthStatistics/Pages/Prams.aspx or CDC's webpage www.cdc.gov/prams.

Acknowledgements

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